GeoEngineering, Inc.
Consultants in Groundwater Control

100 Ford Rd. Denville, N.J. 07834 (201) 625 0700

January 18, 1989

M.A. Hanna Company
1301 E. Ninth Street
Suite 3600
Cleveland, OH 44114-1829

ATTN: Richard E. Hahn

SUBJ: L.E. Carpenter, Wharton, New Jersey
1986 Administrative Consent Order
October through December 1988 Progress Report

Gentlemen:

Per paragraph 35 of the 1986 Administrative Consent Order between L.E. Carpenter & Company and the NJDEP, the following progress report is submitted detailing the status of the activities at the former L.E. Carpenter, Wharton facility.

Between October 1 and November 21, the Auto-Skimmer recovered approximately 50 gallons from MW-6. On November 21 the Auto-Skimmer was moved to MW-10, however due to mechanical problems no product was recovered from MW-10. As of January 11, the recovery system was operational again. A total of 4004.8 gallons of product have been recovered by December 31, 1988.

Attached are the figures depicting contours for piezometric water level and the top of floating solvent elevations, and isopachs of solvent thickness for the months of October, November and December 1988. A summary table for elevations of ground water, floating solvent and three locations on the Rockaway River, and for solvent thickness precedes each month's figures.

On October 20, 1988, groundwater samples were collected at the five designated monitor wells. ENSECO-ERCO Laboratory of Cambridge, Massachusetts, was contracted for the analytical work. The results and laboratory QA/QC documentation are attached.

If you have any questions pertaining to the above, please do not hesitate to call.

Sincerely,

GEOENGINEERING, INC.

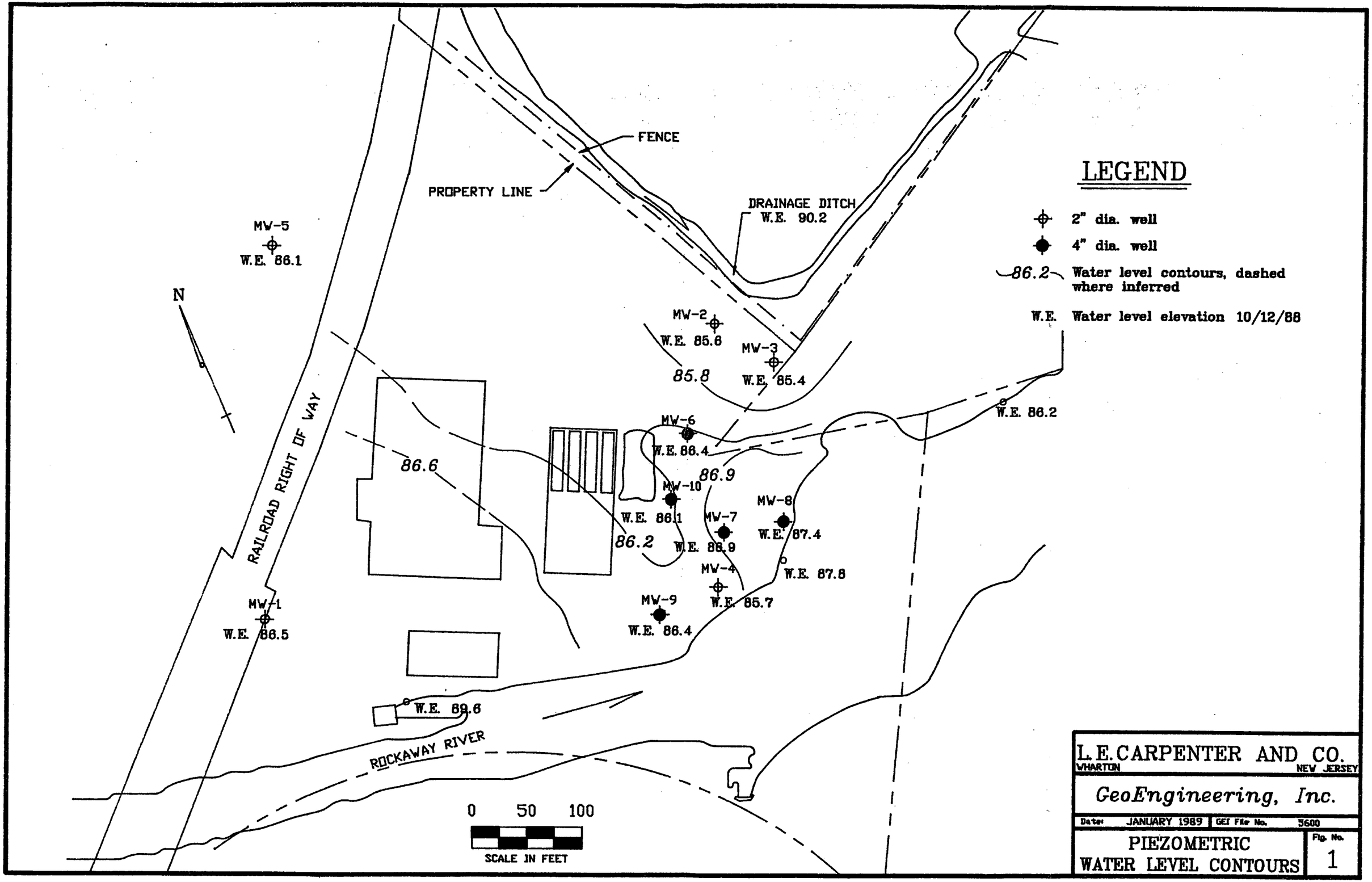
William W. Dunnell IV
Project Manager

WWD/ebt
Attachment
cc: T. Schwartz (5)

TABLE A: SOLVENT THICKNESS AND PIEZOMETRIC ELEVATIONS ON 10/12/88

WELL NO.	PIEZOMETRIC SURFACE ELEVATION (feet above MSL)	FLOATING SOLVENT SURFACE ELEVATION (feet above MSL)	MEASURED SOLVENT THICKNESS IN MONITORING WELL (feet)	CALCULATED FLOATING SOLVENT THICKNESS (feet)
1	86.48 (1)	86.46	0.72	0.11
2	85.60 (1)	85.97	0.25	0.04
3	85.37 (1)	85.93	1.58	0.24
4	85.67 (1)	86.01	0.06	0.01
5	86.14 (1)	no solvent	0.00	0.00
6	86.36 (3)	no solvent	0.00	0.00
7	86.89 (2)	86.85	0.27	0.04
8	87.43 (3)	no solvent	0.00	0.00
9	86.40 (3)	no solvent	0.00	0.00
10	86.12 (2)	85.94	1.19	0.18
DRAINAGE DITCH	90.15			
RIVER PT.	89.55			
RIVER PT.	87.79			
RIVER PT.	86.24			

N O T E S (1) Depth to water measured inside GEOMON Groundwater Sampler/Piezometer (inlet screen is below solvent level)
(2) Calculated piezometric surface, assuming solvent specific gravity is 0.87.
(3) No solvent observed in monitoring well



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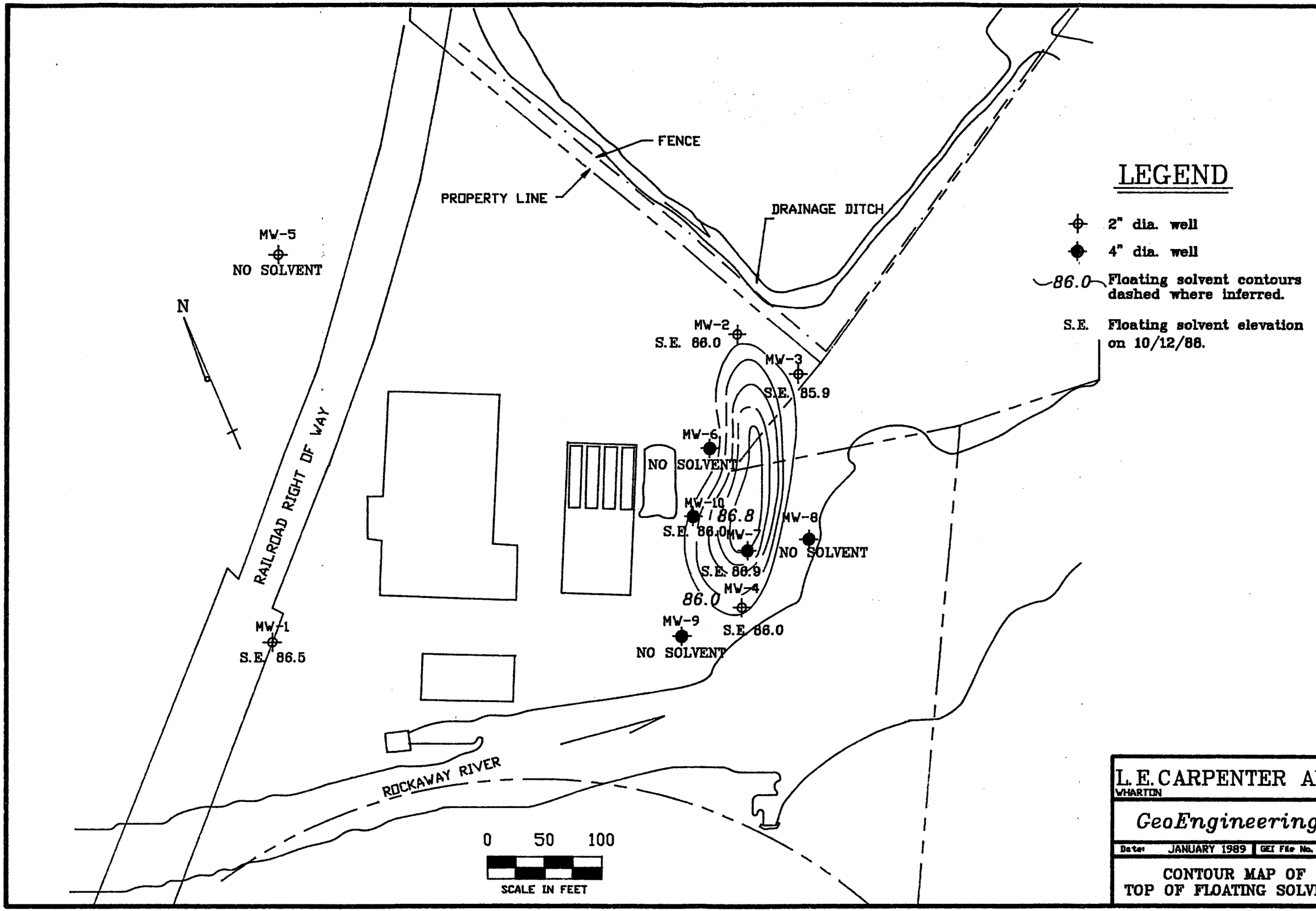
PIEZOMETRIC WATER LEVEL CONTOURS

Fig. No. 1



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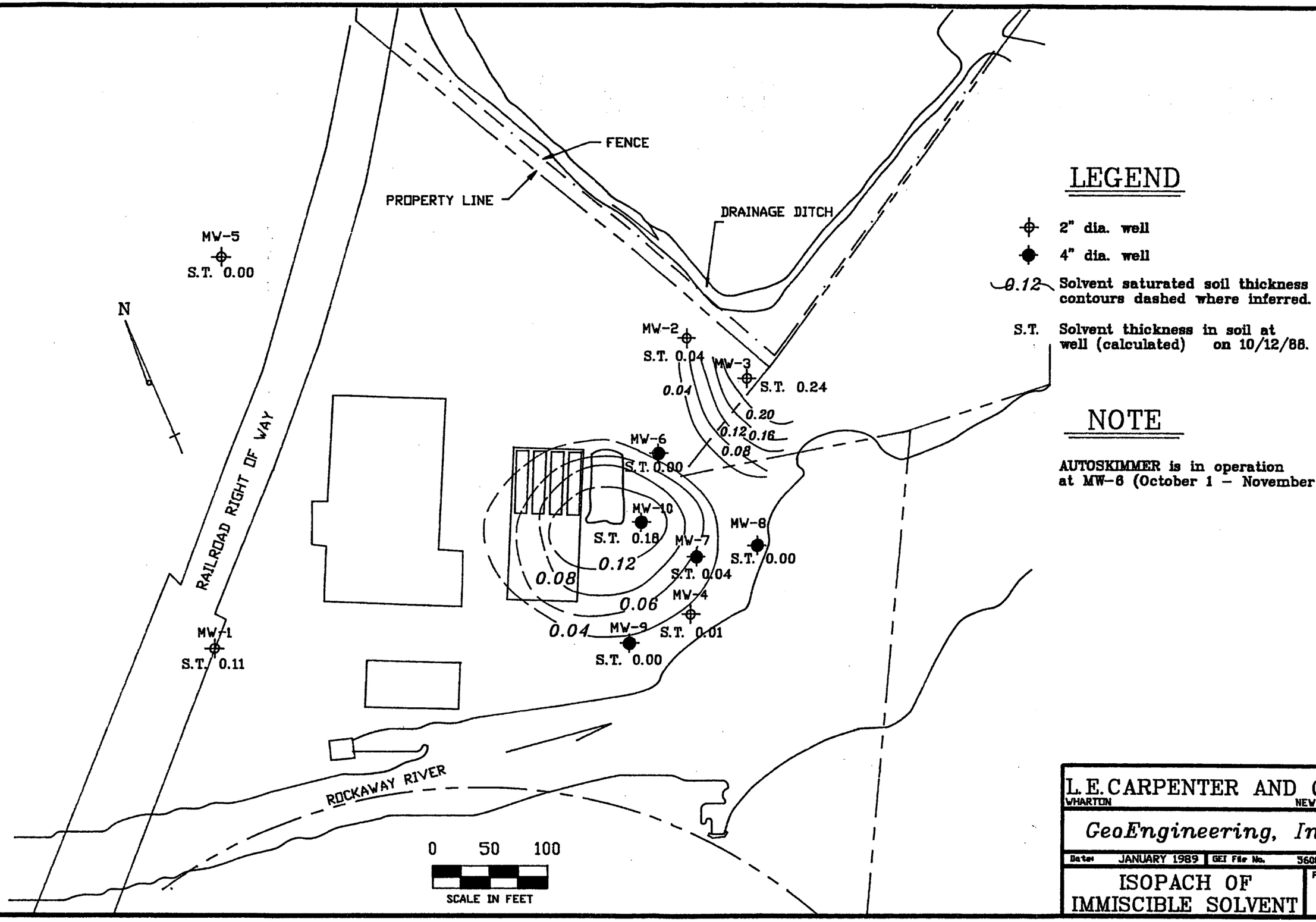
CONTOUR MAP OF TOP OF FLOATING SOLVENT

Fig. No. 2



LEGEND

- 2" dia. well
- 4" dia. well
- 0.12 Solvent saturated soil thickness contours dashed where inferred.
- S.T. Solvent thickness in soil at well (calculated) on 10/12/88.

NOTE

AUTOSKIMMER is in operation at MW-6 (October 1 – November 21)

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ISOPACH OF IMMISCIBLE SOLVENT

Fig. No. 3

TABLE A: SOLVENT THICKNESS AND PIEZOMETRIC ELEVATIONS ON 11/17/88

WELL NO.	PIEZOMETRIC SURFACE ELEVATION (feet above MSL)	FLOATING SOLVENT SURFACE ELEVATION (feet above MSL)	MEASURED SOLVENT THICKNESS IN MONITORING WELL (feet)	CALCULATED FLOATING SOLVENT THICKNESS (feet)
1	86.65 (1)	87.12	1.27	0.19
2	86.33 (1)	86.54	0.29	0.04
3	86.57 (1)	86.95	1.63	0.24
4	86.77 (1)	86.74	1.13	0.17
5	86.83 (1)	no solvent	0.00	0.00
6	89.54 (2)	no solvent	1.50	0.10
7	86.23 (3)	no solvent	0.00	0.00
8	90.33 (3)	no solvent	0.00	0.00
9	88.40 (3)	89.90	1.50	0.22
10	89.52 (2)	88.66	5.76	0.86
DRAINAGE DITCH	90.50			
RIVER PT.	90.49			
RIVER PT.	88.21			
RIVER PT.	86.8			

N O T E S (1) Depth to water measured inside GEOMON Groundwater Sampler/Piezometer (inlet screen is below solvent level)
(2) Calculated piezometric surface, assuming solvent specific gravity is 0.87.
(3) No solvent observed in monitoring well

FENCE

PROPERTY LINE

DRAINAGE DITCH
W.E. 90.5

MW-5
W.E. 86.8

N

MW-2
W.E. 86.3

MW-3
W.E. 86.6

87.5

88.5

89.5

MW-6
W.E. 89.6

W.E. 86.8

MW-10
W.E. 89.5

MW-8
W.E. 90.3

MW-7
W.E. 86.2

88.5

MW-4
W.E. 86.8

W.E. 88.2

MW-9
W.E. 86.4

MW-1
W.E. 86.7

W.E. 90.5

RAILROAD RIGHT OF WAY

ROCKAWAY RIVER

0 50 100
SCALE IN FEET

LEGEND

- 2" dia. well
- 4" dia. well
- 88.5 Water level contours, dashed where inferred
- W.E. Water level elevation 11/17/88

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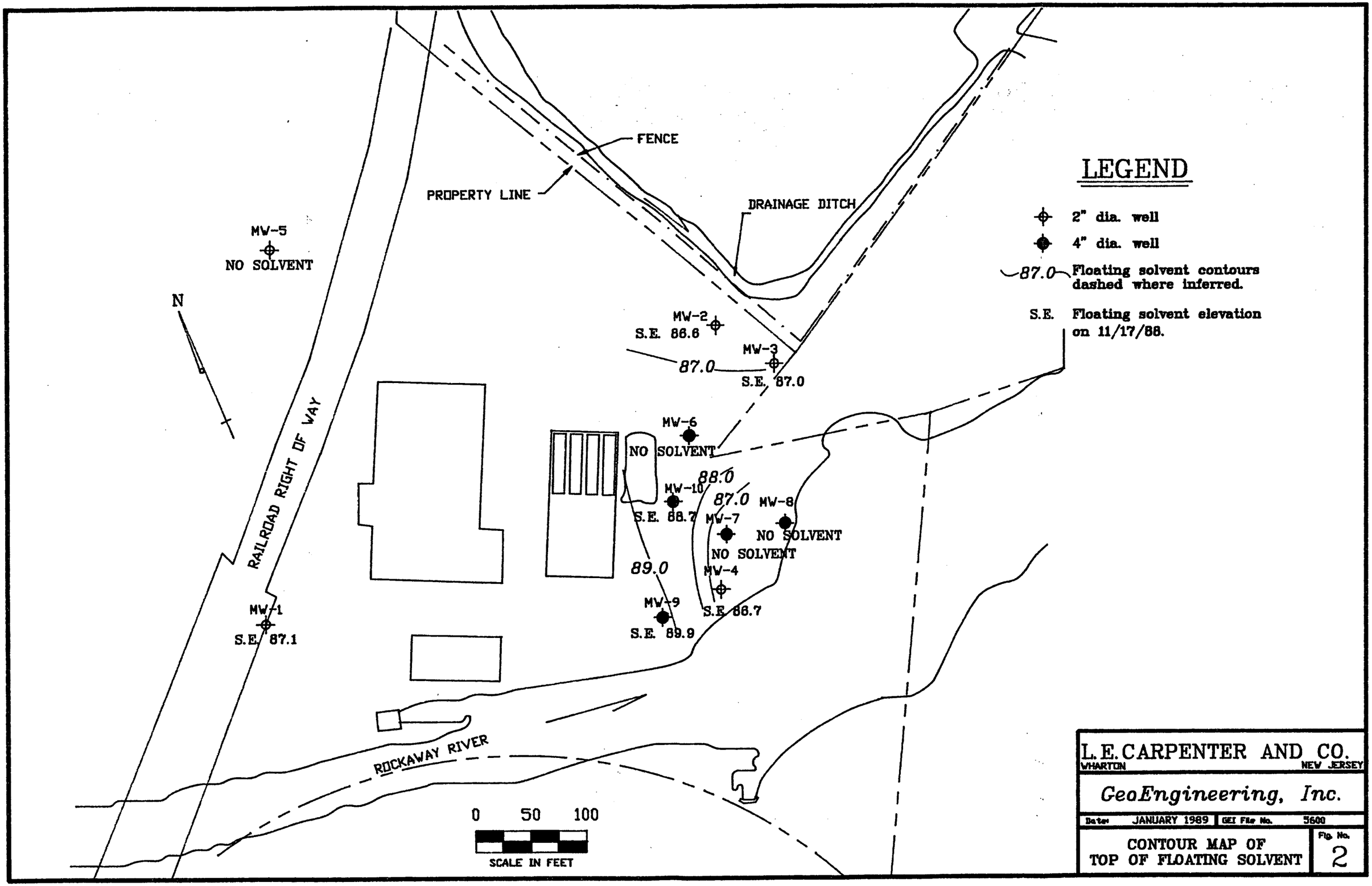
PIEZOMETRIC
WATER LEVEL CONTOURS

Fig. No. 1


FENCE
PROPERTY LINE
DRAINAGE DITCH
MW-5
NO SOLVENT
N
MW-2
S.E. 86.6
MW-3
87.0
S.E. 87.0
RAILROAD RIGHT OF WAY
MW-6
NO SOLVENT
88.0
MW-10
87.0
MW-8
S.E. 88.7
MW-7
NO SOLVENT
NO SOLVENT
89.0
MW-4
MW-9
S.E. 88.7
S.E. 89.9
MW-1
S.E. 87.1
ROCKAWAY RIVER
0 50 100
SCALE IN FEET
LEGEND
2" dia. well
4" dia. well
87.0 Floating solvent contours dashed where inferred.
S.E. Floating solvent elevation on 11/17/88.
L.E.CARPENTER AND CO.
WHARTON NEW JERSEY
GeoEngineering, Inc.
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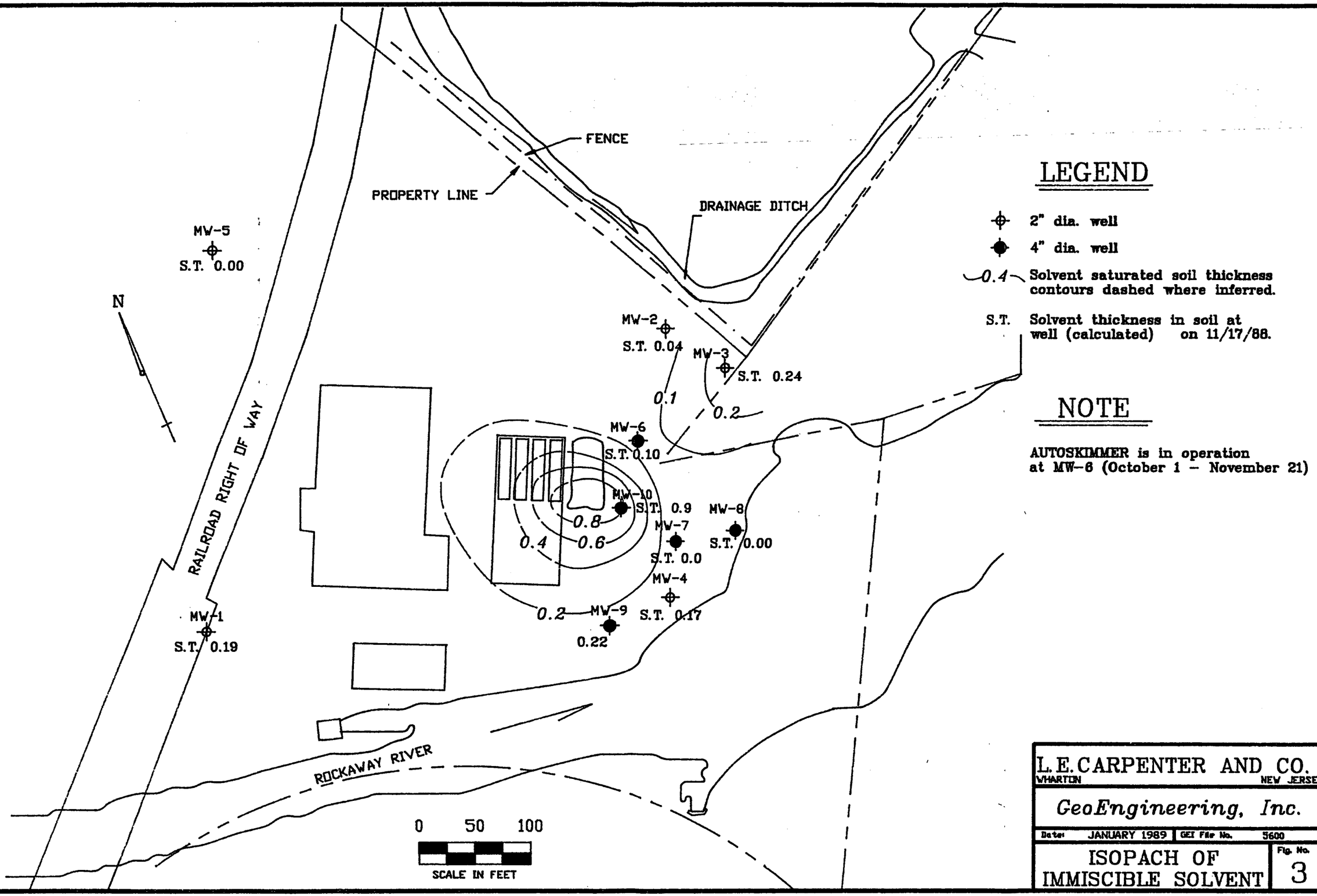
CONTOUR MAP OF TOP OF FLOATING SOLVENT
Fig. No. 2



LEGEND

- 2" dia. well
- 4" dia. well
- 0.4 — Solvent saturated soil thickness contours dashed where inferred.
- S.T. — Solvent thickness in soil at well (calculated) on 11/17/88.

NOTE

AUTOSKIMMER is in operation at MW-6 (October 1 – November 21)

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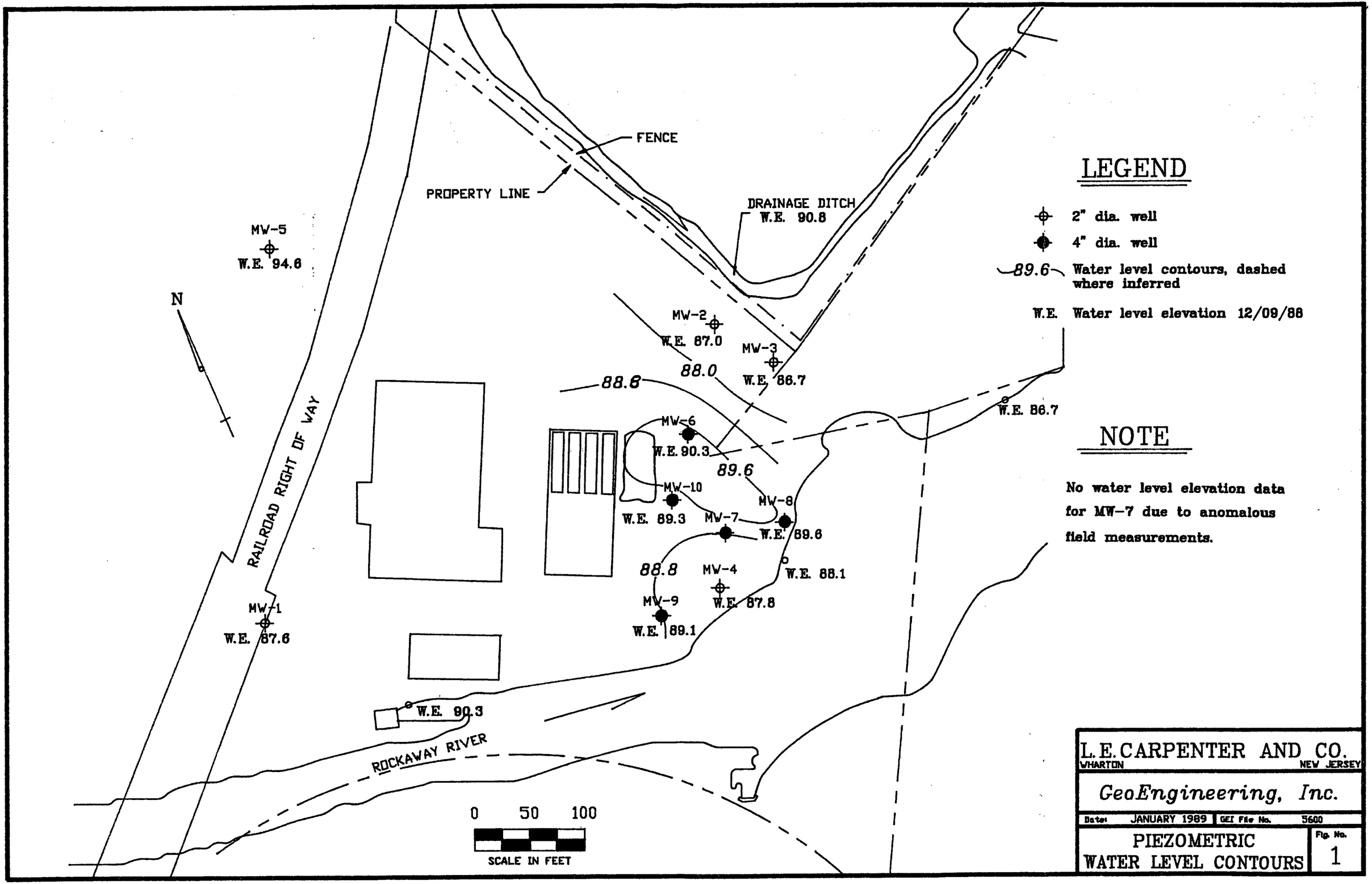
ISOPACH OF IMMISCIBLE SOLVENT

Fig. No. 3

TABLE A: SOLVENT THICKNESS AND PIEZOMETRIC ELEVATIONS ON 12/09/88

WELL NO.	PIEZOMETRIC SURFACE ELEVATION (feet above MSL)	FLOATING SOLVENT SURFACE ELEVATION (feet above MSL)	MEASURED SOLVENT THICKNESS IN MONITORING WELL (feet)	CALCULATED FLOATING SOLVENT THICKNESS (feet)
1	87.57 (1)	88.11	1.76	0.26
2	86.98 (1)	87.88	1.47	0.22
3	86.66 (1)	87.66	2.66	0.40
4	87.82 (1)	87.75	0.40	0.06
5	94.61 (1)	no solvent	0.00	0.00
6	90.28 (2)	89.98	2.04	0.30
8	89.62 (3)	no solvent	0.00	0.00
9	89.14 (3)	no solvent	0.00	0.00
10	89.30 (2)	88.97	2.20	0.33
DRAINAGE DITCH	90.76			
RIVER PT.	90.27			
RIVER PT.	88.10			
RIVER PT.	86.65			

N O T E S (1) Depth to water measured inside GEOMON Groundwater Sampler/Piezometer (inlet screen is below solvent level)
(2) Calculated piezometric surface, assuming solvent specific gravity is 0.87.
(3) No solvent observed in monitoring well



LEGEND

- 2" dia. well
- 4" dia. well
- 89.6 Water level contours, dashed where inferred
- W.E. Water level elevation 12/09/88

NOTE

No water level elevation data for MW-7 due to anomalous field measurements.

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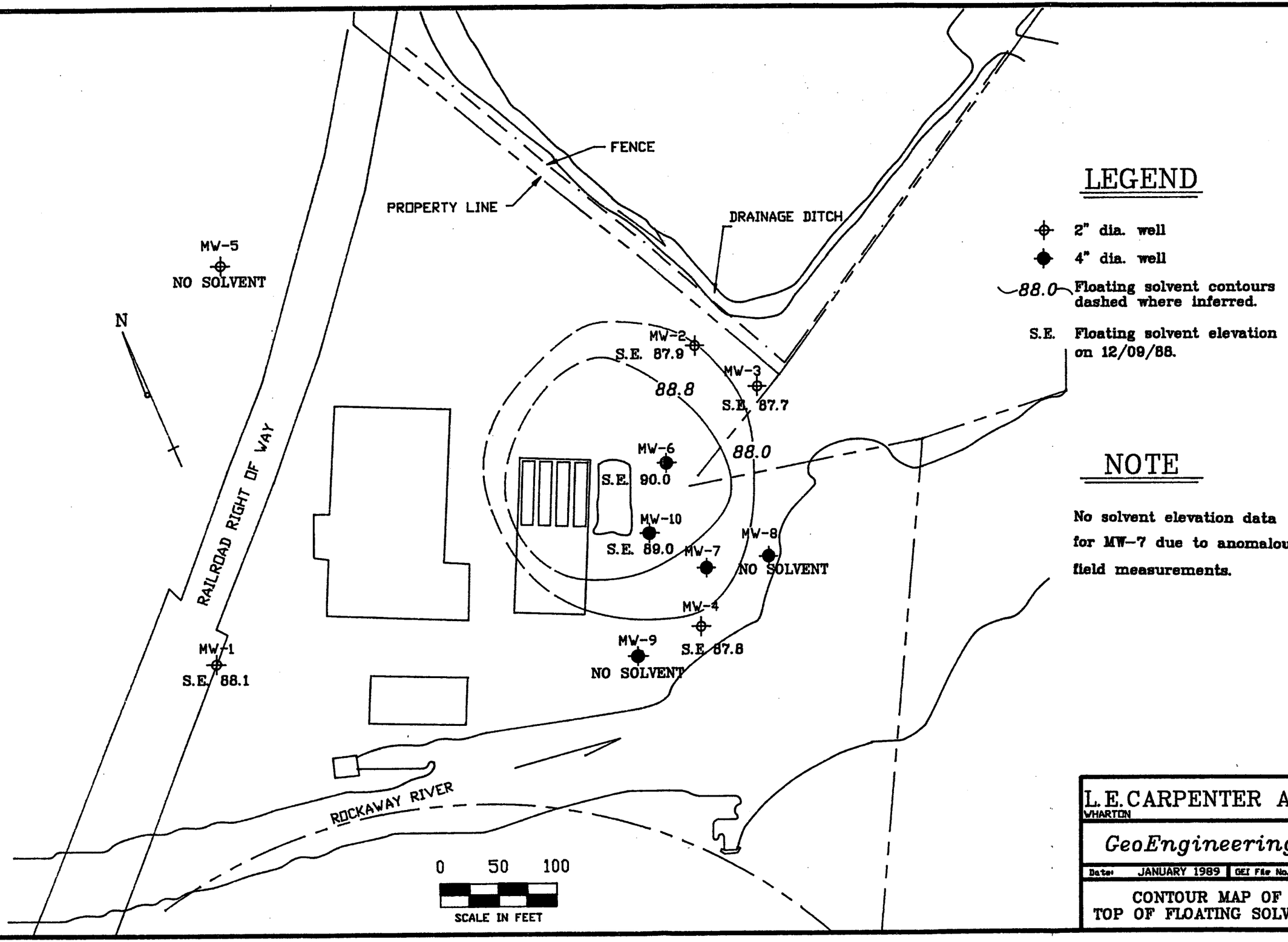
PIEZOMETRIC WATER LEVEL CONTOURS

Fig. No. 1



LEGEND

- 2" dia. well
- 4" dia. well
- 88.0 — Floating solvent contours dashed where inferred.
- S.E. — Floating solvent elevation on 12/09/88.

NOTE

No solvent elevation data for MW-7 due to anomalous field measurements.

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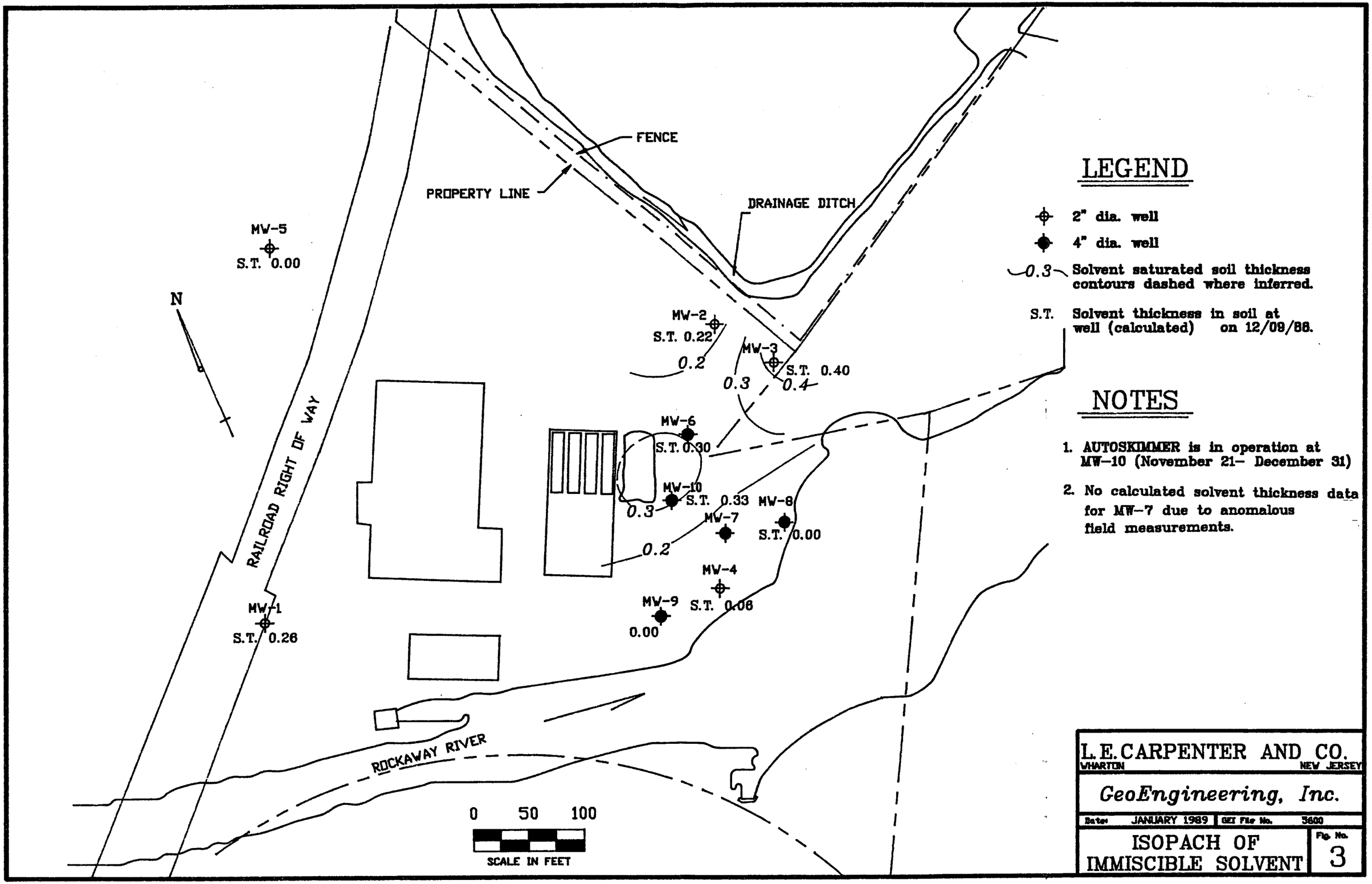
CONTOUR MAP OF TOP OF FLOATING SOLVENT

Fig. No. 2



LEGEND

- 2" dia. well
- 4" dia. well
- 0.3 — Solvent saturated soil thickness contours dashed where inferred.
- S.T. — Solvent thickness in soil at well (calculated) on 12/09/88.

NOTES

1. AUTOSKIMMER is in operation at MW-10 (November 21- December 31)
2. No calculated solvent thickness data for MW-7 due to anomalous field measurements.

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ISOPACH OF IMMISCIBLE SOLVENT

Fig. No. 3